



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,368	01/31/2002	Stephen James Todd	GB920010046US1	2907

7590 07/12/2005

IBM Corp, IP Law
11400 Burnett Road, Zip 4054
Austin, TX 78758

EXAMINER

LAROSE, COLIN M

ART UNIT	PAPER NUMBER
----------	--------------

2623

DATE MAILED: 07/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,368

Applicant(s)

TODD, STEPHEN JAMES

Examiner

Colin M. LaRose

Art Unit

2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25, 27-32 and 34-39 is/are rejected.
- 7) ☒ Claim(s) 26 and 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Arguments and Amendments

1. Applicant's amendments and arguments filed 4 February 2005, have been entered and made of record.

Response to Amendments and Arguments

2. Applicant's newly introduced claims 25-39 are sufficient to overcome the previous rejection of claims 1-24. However, Applicant's arguments with respect to the Wang reference are now moot in view of a new ground of rejection set forth below.

Specification

3. The disclosure is objected to because of the following informalities: The Specification improperly refers to cancelled claims in paragraphs 6-9.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 29 and 36 recite the limitation "the adjacent pixel". There is insufficient antecedent basis for this limitation in the claim. It appears the claims should depend from claims 26 and 33, which provide for an adjacent pixel. For examination purposes, claims 29 and 36 are presumed to depend from claims 26 and 33, respectively. Correction is required.

Art Unit: 2623

6. Claims 31 and 38 recite the limitation "the merging". There is insufficient antecedent basis for this limitation in the claim. It appears the claims should depend from claims 26 and 33, which provide a merging step. For examination purposes, claims 31 and 38 are presumed to depend from claims 26 and 33, respectively. Correction is required.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 25, 27, 28, 30, 32, 34, 35, 37, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent 5,841,903 by Kikuchi.

Regarding claims 25, 32, and 39, Kikuchi discloses a computer-implemented method/system/program for processing a plurality of pixels representing at least a portion of an image, comprising the steps of:

scanning a pixel in the plurality of pixels to determine if the pixel contains image information of significance (figure 5A: the pixels in the image are scanned from left to right and from top to bottom to determine whether each pixel is black (i.e. significant));

in response to the pixel containing image information of significance, determining if only an immediately previously scanned single pixel (single pixel) contains image information of significance (figure 5A: a scanned significant pixel, such as the black pixel located at (2,2) or the

Art Unit: 2623

black pixel located at (3,2), is assigned a label based on the status of only the immediately previously scanned (i.e. leftward) pixel);

in response to the single pixel containing image information of significance, assigning the pixel to an existing image segment of the single pixel (i.e. for the black pixel at (3,2), the leftward pixel at (2,2) is black (i.e. significant), so pixel (3,2) is assigned the same label as pixel (2,2));

in response to the single pixel not containing image information of significance, creating a new image segment and assigning the pixel to the new image segment (i.e. for the black pixel at (2,2), the leftward pixel at (1,2) is white (i.e. not significant), so pixel (2,2) is assigned a new label because it represents the beginning of a new segment); and

in response to the assigning or creating steps, updating inertia information for either the new image segment or the existing image segment, respectively (figures 5C and 5D: the new/existing segment consisting of pixels (2,2) and (3,2) is deleted from the memory 1 and rewritten into the connected component memory 3 so as to record the locations of the pixels of a connected segment, or the “inertia information” regarding the connected segment).

Regarding claims 27 and 34, Kikuchi discloses the inertia information is linear and comprises a number of pixels in the new, existing, or image segments (i.e. the connected component memory 3 in figure 5 corresponds to the claimed inertia information in that the connected component memory 3 records the number of pixels contained in the linearly connected segments).

Regarding claims 28 and 35, Kikuchi discloses the plurality of pixels represent a single horizontal line of pixels (i.e. Kikuchi discloses processing the image line-by-line in the horizontal direction).

Regarding claims 30 and 37, Kikuchi discloses storing in a register the updated inertia information immediately after the updating step is performed (i.e. Kikuchi stores the inertia information in a connected component memory 3, as shown in figure 5, after deleting a connected segment from memory 1).

Allowable Subject Matter

9. Claims 26 and 33 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claims 26 and 33, Kikuchi discloses examining adjacent pixels to determine whether any adjacent pixels contain information of significance. As shown in figure 5E, Kikuchi teaches examining the adjacent pixels on lines above and below the extracted segment [(2,2) – (3,2)] to determine whether any of the adjacent pixels are significant. If any of the adjacent pixels are significant, then they are considered to be a part of the extracted segment and are merged with the extracted segment, as shown in figure 5F.

However, claims 26 and 33 recite, “determining if only a single previously scanned pixel adjacent to the pixel ... contains image information of significance.” This is in contrast to the teachings of Kikuchi, wherein all of the adjacent pixels are examined, rather than only a single adjacent pixel. Kikuchi does not teach “determining if only a single previously scanned pixel

Art Unit: 2623

adjacent to the pixel ... contains image information of significance,” since Kikuchi examines all of the adjacent pixels. For this reason claims 26 and 33 would be allowable if rewritten in independent form.

10. Claims 29 and 31 are objected to as being dependent upon a rejected base claim, but would be allowable if (1) claim 26 is rewritten in independent form, and (2) claims 29 and 31 are rewritten to each depend from claim 26 in order to overcome the above rejections under 35 USC § 112.

11. Claims 36 and 38 are objected to as being dependent upon a rejected base claim, but would be allowable if (1) claim 33 is rewritten in independent form, and (2) claims 36 and 38 are rewritten to each depend from claim 33 in order to overcome the above rejections under 35 USC § 112.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37


Art Unit: 2623

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Colin M. LaRose whose telephone number is (571) 272-7423. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au, can be reached on (571) 272-7414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306. (After July 15, 2005, the fax number will be changed to (571)-273-8300.) Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2600 Customer Service Office whose telephone number is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

CML
Group Art Unit 2623
28 June 2005



VIKRAM BALI
PRIMARY EXAMINER